WITS: Web Interface for TeleScience

Dr. Paul Backes, Dr. Mark Powell, Jeffrey Norris & Marsette Vona

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12:00 - 1:00 PM
167 Conference Room

The Web Interface for TeleScience (WITS) has been developed to enable scientists who are geographically distributed to participate in mission operations of Mars landers and rovers from their home institutions. The MER mission adaptation, called the Science Activity Planner, will be used for downlink science data visualization and science activity planning. The tool provides automatic panorama mosaicing, 3-D terrain visualization, image cube visualization, target selection, activity planning and visualization, as well as other features. This talk will discuss the functionality of the WITS system, as well as its software architecture and design, and some of the challenges faced in its development.

Dr. Paul Backes is a Technical Group Leader in the Mobility Systems Concept Development Section (348) at JPL. He received the 1993 NASA Exceptional Engineering Achievement Medal, Best Paper Award at the 1994 World Automation Congress, 1998 JPL Award for Excellence, and 1998 Sole Runner-up NASA Software of the Year Award. Backes received a BSME degree from U.C. Berkeley, and Ph.D. from Purdue University.

Jeffrey Norris is a computer scientist in Section 348 at JPL where his work is focused in the areas of distributed operations and science activity planning for Mars landers and rovers. Currently, he is a software engineer on the MER mission ground data system and mission operation system teams. Norris received Bachelor's and Master's degrees in Electrical Engineering and Computer Science from MIT.

Dr. Mark Powell is a computer scientist in Section 348 at JPL where he is currently a software engineer on the MER mission ground data system and mission operation system teams. Powell received a Ph.D. in Computer Science and Engineering from the University of South Florida, Tampa.

Marsette Vona, III is a computer scientist in Section 348 at JPL where his current work is focused in the area of high-performance interactive 3D data visualization. He was awarded the Computing Research Association Outstanding Undergraduate Award in 1999 for his research in Self-Reconfigurable Robotics. Vona received a B.A. from Dartmouth College and an M.S. from MIT.

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